Virginia Wildlife

APRIL 1971

VOLUME XXXII / NUMBER 4

20 CENTS

Virginia Wildlife

Dedicated to the Conservation of Virginia's Wildlife and Related Natural Resources and to the Betterment of Outdoor Recreation in Virginia

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, *Richmond, Virginia 23230*

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APRIL

Volume XXXII/No. 4

IN THIS ISSUE **PAGE**

Editorial: Shaping the Future Environment 3
Letters 3
Spring Gobblers: Hunting at its Finest 4
Remembering in the Rain 7
Fishing a Forgotten Trout Stream 8
A Look at the 1970 Deer Season (West) 10
Sound of the Orchard Oriole 12
Conservationgram 13
Beach Patrol 14
Home—Is a Place to Stay 16
Pheasants as a Farm Crop 18
Hare Hunt 20
Danville Doctor Fills Commission Vacancy 21
Bird of the Month: The Black-capped Chickadee 22
On the Lighter Side: Journal of a Dog Kennel 23
The Drumming Log 24
Youth Afield 25
On the Waterfront 26
Pictorial Sketchplate: Hawks 27
Free Running Dogs Destroy Wildlife (pictorial) 28

COVER: Opening day of trout season and an untended creel could combine to set up a free meal for an inquisitive raccoon prowling a lonely stream bank. Our artist: J. M. Roever, Cocoa Beach, Florida.

SUBSCRIPTIONS: One year, $2.00; three years, $5.00. Give check or money order, made payable to the Treasurer of Virginia, to local game commission employee or send to Commission of Game and Inland Fisheries, P. O. Box 11104, Richmond, Virginia 23230.

Virginia Wildlife is published monthly at Richmond, Virginia, by the Commission of Game and Inland Fisheries, 4010 W. Broad Street. All magazine subscriptions, change of address notices, and inquiries should be sent to Box 11104, Richmond, Va. 23230. The editorial office gratefully receives for publication news items, articles, photographs, and sketches of good quality which deal with Virginia's soils, water, forests, and wildlife. The Commission assumes no responsibility for unsolicited manuscripts and illustrative material. Credit is given on material published. Permission to reprint text material is granted provided credit is given the Virginia Commission of Game and Inland Fisheries and Virginia Wildlife. Clearances must be made with photographers or artists to reproduce illustrations.

Second-class postage paid at Richmond, Va.

EDITORIAL

Shaping the Future Environment

WILDLIFE biologists were among those relatively few people who were studying ecology and applying its lessons to lands and waters long before the words ecology and environment came into the wide and common usage they enjoy today. True, their professional concern has been with the *wildlife* environment: but one of the most obvious lessons that the study of ecology teaches is that wildlife environment and the human environment are inseparable. Wildlife shares our own environment, is a product of that environment, and is a part of that environment. When we speak of wildlife environment constantly shrinking, being degraded, and its productivity being reduced, we are speaking of what is happening at least in a qualitative sense, if not indeed in a quantitative sense, to the human environment as well.

Of course, if we really are bent upon polluting and contaminating our own environment until we cannot survive in it ourselves, it may seem that the fate of other species that share that environment with us is of relatively small consequence. The human race is just self-centered enough so that if its very survival is at stake not many of its members are likely to consider it a great additional tragedy that turkeys, deer, bear, ospreys, eagles, songbirds and other species may suffer the same fate we face. Preservation of an environment in which we can survive is a human problem, not just a wildlife problem.

When we speak specifically of *wildlife* environment shrinking, being degraded, and its productivity being reduced, we are speaking of the effects of manipulations and changes in our human environment within a frame of reference in which mere survival is not the issue—changes and manipulations which do not just determine whether we will survive, but which determine the kind of environment in which we will survive. We are speaking of decisions to build dams on all or most of our free-flowing streams; decisions as to commercial development of seashores and barrier islands; decisions as to which lands people ought to live on, and which they ought not to live on; decisions as to where to locate industries, highways, and other works of man; decisions as to the wisdom of draining and channeling or filling in wetlands, and thus upsetting or destroying their entire ecology.

The biggest long-range problems facing those charged with managing fish and wildlife resources are problems they cannot solve by themselves. They are problems of basic land-use policies, decisions and practices, which could create a high quality environment for ourselves and an optimum, productive habitat for our fish and wildlife resources, but which usually do not. We have not made a good record in this field of human endeavor. What has never been done, and what urgently needs to be done, is to take stock of the land and water resources available to us now, decide just what kind of a future environment we want to create for ourselves out of these resources, determine the right use for each component of these land and water resources, and plan our future accordingly. The conflicting goals of preservation and exploitation need to be reconciled in a philosophy of creative landscape architecture, applied on a state and national basis.

The task will not be easy. New attitudes and approaches to basic land-use policy and decision making will have to be developed. So far, the people, through their governments, have not forged the tools and erected the machinery needed to get the job done. But the technology required to plan and create the kind of future environment we want is available. We have the knowledge; the question is whether we have yet acquired the wisdom and the will to proceed.—J. F. Mc.

LETTERS

"Free" Hunting, Stray Dogs, and Muzzle-loaders

HAVING hunted in Virginia a good deal, taking note of articles on game management, reading letters about German hunting from a German correspondent, taking note also of the recent article "Waidmannsheil: Hunting in Germany" (*Virginia Wildlife*, January 1971), I am convinced it is time to end this idea of free hunting.

Imagine how much game we could have if the landowners could manage their land profitably for game production. A "Please—Thank you" compensation for hunting does not pay for maintaining food or cover. Of more importance, the parasitic free hunting arrangement wherein more take and fewer give makes the recipe for irresponsible hunting. The hunter has only a couple of hours of wages invested in his license, and the farmer is expected to provide the free game.

Mr. Foster's letter (*Virginia Wildlife*, January 1971) on cats is interesting. However, there is a brother varmint doing much more damage to game than cats. The countryside is full of dogs. They pack together, are much larger than cats, have keen scenting powers—traits that make stray dogs devastating to our game.

I would be interested in having Virginia implement a primitive weapons hunting season along with our present archery season. This muzzle-loader shooting is becoming increasingly interesting to people and it would spice up our present arrangement.

Henry Page
North Garden

A Virginia hunting license in itself does not entitle anyone to "free" hunting on anybody else's private land. Every landowner has the right to keep the irresponsible hunter off his property, and to charge the responsible hunter for the privilege of hunting if he wishes.—Ed.

Crows to Pick

I have a few crows to pick with *Virginia Wildlife* magazine:

The back section devotes a full page to ON THE WATERFRONT. From reading this over the years one comes to the conclusion that you have never heard of a canoe, and that the only kind of boats you know are motorboats roaring around disturbing wildlife and spreading oil on the water. If there is any boat that does not disturb wildlife and fits in with wilderness quiet, it is the same canoe about which you seem to be so totally ignorant. Surely a wildlife magazine should take some note of some boat other than motorboats.

The other crow concerns the Rappahannock river, the outstanding white water and smallmouth bass river in northern Virginia, and possibly the longest wilderness stretch, uncrossed by a bridge or touched by a highway, in the state—an ideal wildlife habitat in its present state. This is to be flooded out, wildlife and all, for no good reason. Yet I have never known your publication to raise a finger in official objection to this tremendous loss of wildlife habitat.

Randy Carter
Warrenton

SPRING GOBBLERS:

Hunting At Its Finest

By TOM RODGERS
Fredericksburg

IT was just another crisp April morning to most people, but to me it was my first spring gobbler hunt. That was back in 1962 as I stood on the fog-covered banks of the Rapidan River at dawn.

At that time the new era of spring turkey hunting was only a year old in the Old Dominion, and it was offering a new challenge. Interested, but not certain this type of hunting was for me, I decided it was time I gave it a try.

For an introductory lesson I had selected William L. Timberlake as my instructor. Known to his friends as "Willy," he is one of the most talented turkey hunters in the Fredericksburg area. Having grown up in the wilds of Culpeper County on the Rapidan River, Willy has had his share of successful turkey hunts.

With 40 years of hunting experience and over 60 turkey kills under his belt, his know-how has brought about the downfall of many a great turkey gobbler. Needless to say, this is the type person from whom you should take lessons.

It was still dark as we boarded a small boat docked in Hunting Run and silently poled our way across the river to Culpeper County. Something told me that this wasn't going to be just another hunting trip. In fact, it turned out to be a whole new dimension in my hunting world.

As the river water lapped at the bow of the boat, visions of turkey figures and all the other things I had either seen or read about wild turkey hunting were jumbling through my head.

However, these visions suddenly came to an abrupt end as we hit the opposite bank and tied up. Willy turned around and said, "I know there's an old gobbler in these woods, and, if he comes to us, you'll see a spectacle you'll never forget."

After three straight mornings of calling, the author finally enticed this 19 pound gobbler with the seductive notes of his caller.

We fumbled our way through the early morning darkness until we found a high oak-covered ridge where turkey voices could be heard at a distance.

Willy explained that we would have to sit still and listen until a gobbler revealed his position, and then we would move in as close as possible without spooking him.

A lone whippoorwill joined the faint light in the east and Willy said, "Did you hear that?" Through my ignorance I replied, "Hear what?"

I strained my ears intently and then through the silent forest it sounded again. "Gobble, gobble, gobble." Willy motioned, and we moved closer to this creature that was shaking the forest with its every breath.

Picking our concealed positions, we moved into place for the coming performance. Suddenly everything became dead still, and Willy gave out three short yelps on his wing bone caller.

Before the last note had sounded, there came an explosive "Gobble, gobble, gobble." To our astonishment, the gobbling musical taking place before us was not that of one turkey, but three overly excited gobblers.

Closer and closer came the threesome, all gobbling simultaneously. Giving the trio a reassuring cluck or two on his caller, Willy nodded to signal that the show was about to begin.

Suddenly, we were surrounded by the darndest commotion a hunter's heart could stand without stopping completely. The forest became a stage filled with the sounds of sticks popping, leaves rustling and turkey gobblers strutting about ready to do battle over a single hen.

The last few moments of this episode turned into pure agony. I couldn't see a thing moving, and yet I knew they were there and looking down the barrel of my Remington automatic.

I found it difficult to believe that these three loudmouth gobblers could be that close and still be invisible.

Seconds seemed to turn into pulsating hours, and my heartbeat became uncontrollable. I was afraid to take a breath much less blink an eye for even a second.

Then it happened! With one giant step a mighty gobbler came from behind an oversized elm tree, stopped and looked directly at me.

"Willy" Timberlake, 40 years an expert at seducing wily old gobblers, proudly displays trophies taken over the last three years.

As the handsome bird began to strut about gobbling, the morning rays of sunlight glinting on its iridescent feathers created a splash of bronze beauty.

I must have blended well with my surroundings, because it twisted its neck to check a nearby clearing. Slipping off the safety, I raised my shotgun and pulled the trigger.

The heavy-bearded gobbler lay before me in all its natural beauty. Figuring the show was over for the "ole tom," I set my gun against a tall oak to recall the event that had just taken place.

The turkey, however, had other ideas. As I was walking to claim my prize, it hopped up to make its escape.

Running, leaping and finally taking to the air, the big bronze bird set its wings and glided safely to the next ridge. Watching this almost impossible feat, I then realized that I had only stunned the turkey and he would live to serenade the woodlands on another April morning.

Since April 24, 1961, when the Virginia Commission of Game and Inland Fisheries introduced this springtime spectacle, thousands of Old Dominion hunters have enjoyed similar hunting adventures.

(Continued on next page)

In the springtime it makes little difference what type of call is used as long as it is used with skill and patience. Only the box caller will imitate the gobble of the wild tom.

For instance, turkey tags from the 1970 spring season for the 10th straight year established a new record of 1,618 gobblers. Through careful management, the Commission has been successful in establishing or reestablishing a huntable population of wild turkeys in almost every county in this state.

In fact, the only counties that will remain closed this spring are Buckingham, Dickenson, Lee, Russell, Scott and Wise. Clinch Mountain and Hidden Valley Wildlife Management Areas will also be closed.

But even with these counties closed to spring turkey hunting, there are still plenty of woodlands in Virginia where a man and a turkey can talk the same language.

However, this language isn't as simple to master as it may sound, for there are no critics of this gobbledygook that can rival the wild turkey for detecting a false syllable.

No matter whether you use the yelp, putt, or cluck call to lure your trophy, hours of practice and experience are required.

This can be obtained in three ways: By using an instructional record, by listening to a barnyard turkey hen, or by actual hunting experience.

It makes little difference what type call you use—slate, wing-bone, diaphragm, cedar box—the idea is to give the impression of a stray hen looking for the opportunity to join a gobbler's harem.

After you have mastered the calls of the wild turkey, the next thing to look for is an audience. In the springtime this isn't hard to find, if you do some pre-season scouting.

Fresh turkey scratching, tracks, and loose feathers are sure signs that turkeys have recently been through the area. If you don't mind losing sleep, drive into your favorite hunting area at dawn about two weeks before the season opens and listen for the "king" himself. Plot his position for several mornings, and you'll know exactly where to find him on opening day.

Fresh turkey scratching is the most inviting "sign" to a turkey hunter. Find this, and turkeys will not be far away.

If you use a blind while calling, use only enough camouflage to break up your image. Many hunters wear a camouflage suit complete with head net and gloves.

The concealment of the face is a must. I once heard a dyed-in-the-wool turkey hunter in the Tennessee mountains remark, "More turkeys are spooked by ugly faces than any other way."

Other primary "musts" of a successful turkey hunter are: (1) Use a capable full-choke shotgun loaded with magnum 4's or 6's. (2) Don't overwork your caller; let the turkey do the talking. (3) Hunt areas where scouting has shown turkeys to be present. "You can't eall 'em if they're not there." (4) When actually calling, remain as quiet and as motionless as possible. The wild turkey's senses are three times as acute as yours. (5) Alway honor the call of another hunter: good sportsmanship is part of hunting.

It's nice if you can outwit that old Tom on an early spring morning, but if you don't and your calling was good enough so that he answered several times, you still had an experience that may last a lifetime.

This is what makes spring turkey hunting so enjoyable. It's hunting at its finest, and there isn't too much of that left in this modernistic age of computers and technology.

The right and the wrong of camouflage: bare face and hands, and shining gun barrel can ruin an otherwise perfect hunt (above, left), while a shadowed position, face mask, hood and gloves (below, right) reduce the hunter's chance of spooking his quarry at the crucial moment.

Remembering in the Rain

By PETE ELKINS

Lexington

IT was one of those hybrid days that are a cross between genuine winter and a cold, wet spring. The month was December, with the hunting season in Rockbridge county already old. I could have been hunting hard, but past weeks had been good to my game bag so I was satisfied. Usually the memories didn't begin until the season was over in February. Yet this soon I was looking back to see again the brown buzz of quail above the rigid head of a game-wise pointer, the feathered roar of a turkey, and the tentative delight of a deer in new-fallen snow. As I walked near the young Labrador, I could hear the murmur of the river.

My thoughts strayed in tune to the dog's eager pace. The thought of a quick shot at a flushed wood duck diminished as I stared in fascination at the upside-down antics of a nuthatch on an overhanging tree. My Labrador pup delighted in the rain and misery as she danced from new scent to scent. Here the tiny spoor of a field mouse, there the musty prints of a muskrat that had paused on the Maury's bank before easing into cold water.

Following behind the pup, I shrugged my neck deeper into a wet collar, half hoping that she might blunder into a rain-dazed grouse. The Lab disappeared around a bend in the riverbank. When I caught up with her, she was excitedly sniffing around the base of a small seedling. I soon saw why. The sapling had been gnawed almost in two. The ground below was covered with small fallen trees, all bearing the unmistakable marks of sharp teeth. There was a beaver colony on the Maury.

In that moment with the rainmist and dim light, it was easy to watch the muddy outlines of my bootprints fade into the soft contours of leather moccasins many years before. The light 16-gauge in my hands was the solid heft of a long Kentucky rifle, and my left shoulder felt the insistent pull of a swinging powderhorn. Even the Maury was clearer with purple gravel shining under the heavy flow of water. The sediment covering of progress had not yet coated the river bottom with its life-strangling blanket.

The beaver along the Maury had gone the way of the Indians, either driven away or their habitat destroyed. By 1910, Virginia's beaver population had been virtually destroyed. By 1932, the state Commission of Game and Inland Fisheries began a successful restocking program. At present, the beaver is reestablishing itself along inland lakes and streams. Beavers are the largest of North American rodents, averaging between thirty and fifty pounds.

The beaver's size with its luxuriant chestnut coat invoked man's money greed. This coupled with "civilization" came alarmingly close to wiping out the species. As long as we protect the beaver, a part of our cultural and environmental heritage will always be with us.

We nearly lost the beaver once. He is back in many of his old haunts, this time to stay, we hope.

Commission photo

My Labrador pup could tell me much about beavers that I could never fathom. Her nose is her informer. My knowledge of beavers is limited to what I see in the field or in a book. Yet the dog knew only that the beaver had been there within the history of her nose, perhaps only a few hours, depending upon her bloodlines, the moisture in the ground, temperature, or myriad factors affecting her shiny nose.

I knew that a beaver had been there two hundred years ago, along with the passenger pigeon and ivory-billed woodpecker. The latter two are gone now, never to return in our lifetimes. We nearly lost the beaver once. Even if most people don't have a nose like a Labrador, they should be able to learn from their past mistakes.

FISHING A FORGOTTEN TROUT STREAM

By ED MYERS
Martinsville

"THIS looks like a good spot," I said, slipping my pack from my back and unstrapping the knee-boots slung about my left shoulder.

My fishing buddy, Larry Martin, nodded. "Good cover alright," he said, looking about as he followed suit with his pack and boots.

We were standing knee-deep in old leaves alongside a small, seemingly inconsequential stream that trickled through the southwestern part of Virginia. We had been climbing and crawling for over 15 miles, sometimes following the stream and at other times having to bypass the water for as much as a mile because of the dense undergrowth.

"Whew," said Larry, sitting down on his pack; "all I got to say is there better be trout here."

"Don't worry, they're here," I answered, catching a flash in my mind of a time over 15 years ago when all the area around us was farmland, and I was a smallfry of 12.

"All this land was pasture once," I said, pointing through the thick layer of bushes and trees surrounding us. "This stream was a rather large creek. I can remember when it ran as much as 10 feet wide in places."

"Well, it doesn't look like much now," Larry commented. "How can we fish water ankle deep without at least feeling a little stupid? Better still, how can trout possibly live in water this shallow?"

I had expected these questions. Larry and I have been fishing partners of sorts for almost five years and his quick skepticism is nothing new to me. We both live and work in Martinsville, and now and then we follow the gull to the Chesapeake area and throw a few spoons in the blue Atlantic. But, actually, we both prefer freshwater angling and always stay on the lookout for those few places where everybody and his brother hasn't fished.

The stream I had dragged Larry off to this time has the neighborhood name of Bobbitt's Creek. But that means nothing because there are dozens like it running through Virginia. They seem to begin nowhere and lead nowhere. In truth, they usually brave a course of their own for a dozen miles or so before losing their identity by joining larger streams.

The good thing is this: likely as not, a lot of the streams such as Bobbitt's Creek were once trout havens to opening day fishermen. It's just that over the years, some streams tend to lose their size for various reasons, farms along their routes die as rural people head for the cities and towns and the land eventually grows over until it's once again a regular wilderness.

But, as I just said, these streams were once active trout streams. In time, however, the Commission quit stocking them, because of their decreasing size and because they weren't getting enough fishing action from area fishermen. What has been created from this is an angler's paradise, providing, of course, you're willing to spend a lot of time looking into old state stocking records and such.

If you're lucky, though, there are other ways of finding these streams. The thing that first took me back to Bobbitt's Creek happened in the summer of 1969, when I bumped into an old angler who still lived in the Carroll County area. His name was Harrison Mitchell, and I remembered him as having once strung "lay-lines" across the New River back when I was a boy living in Carroll.

"You ought to try Bobbitt's Creek sometime," he told me, as the conversation worked itself around to fishing. "I hear there's been a lot of rainbows pulled out of there in recent years."

I took the advice that same summer and hoofed my way back into the headwaters of the skeleton-like stream. At first, I hadn't expected the long and tiring walk. I had parked my car off Route 52, about seven miles north of the small town of Hillsville. The stream passes under the highway at this point and drops down through fairly clear bottomland until three miles later it leaks into Big Reed Island Creek. The trout I caught on this first trip sold me on this peculiar kind of trouting. And it is a type of angling somewhat unique. For good examples of just why, I'll go back now and pick up the trip with Larry Martin.

We slept where we dropped our pack that night and broke out our rods early the following morning. As dawn began to fill the sky, we were wading into the water near a small bend several yards above where we had camped. I

eventually moved a few hundred yards downstream from Larry, because in small brook fishing there's not room for two anglers to fish close. But, even more importantly, my stirring around below could roust out some lunkers for Larry. It must have worked, because only 10 minutes had passed when I heard Larry yell.

I clambered out of the water and pushed my way back up the bank until I came to him, standing somber in the water with his rod limp in his hand.

"What happened?" I questioned.

"I had a nice one, but my rod got jammed in the blasted bushes overhead and I couldn't play him." He bent down and looked through the tunnel of bushes where the stream ran. "It's like this all the way, isn't it? I need a short rod like yours."

I had told him earlier that his rod was too long to fish this kind of stream.

Thus began lesson number one for fishing a small stream. I hated to do it, but I cut Larry's rod down to two and a

Above, and opposite page: Larry and I work the small, fast flowing Bobbitt's Creek in Carroll County, typical of many nearly forgotten streams once regularly stocked with trout whose wild raised progeny remain to please the angler who finds them.

half feet in length—not including the handle portion. He had spent a lot of time earlier laughing at my short rod. "You'll never get any action with that thing," he had said. And he was absolutely right. But how much action could you expect to get out of a six-footer riding its tip in the bushes all the time?

By noon, I had five good rainbows and one native brookie on the stringer. I suppose I should really refer to the rainbows as natives, too, since they had to have been in the stream for at least 11 years of ancestry. Larry had one rainbow and several large creek chubs. We stopped under a large white oak not far from the stream and had lunch of sandwiches and coffee from a thermos. Larry's conversation stuck to the difference in techniques for fishing these wilderness streams.

One main concept that each of us was learning centered around the back-breaking concentration we had to give to the stream in order to catch trout. We had been fighting our way along for hours in an upside-down letter "L" position. It was an onerous way to travel but it was the only way. Yet, we were learning things about the stream that could possibly help us anywhere else we fished in the future.

There are a number of good ways to fish a small stream, but there's only one way to fish a small stream that runs like a tunnel for miles through heavy growth. You simply have to get in the water and fight your way downstream. There's no other way.

"I've found that the best way to do this is to use a very short rod—no more than four feet in length, a pair of knee or hip waders, and a good spin-cast reel. The idea, then, is to begin working your way down slowly, letting out as much as 10 to 15 yards of line ahead of you. Most streams, if you travel slow enough, will "eat" your line in the current making snagging next to impossible. The rough current will also allow your bait to "scan" the stream by washing it from side-to-side as you move along. With this method, an angler can get into the deeper pockets of water along the sides of the stream. These undercut pockets are the only place for good trout in such skeleton streams.

The best line for this kind of angling is a good standard monofilament, about two to four pound test. As a matter of record, I'll tell you that I use the Garcia "invisible" monofilament in a four pound test. I'm not trying to sell it, but it is a good improved "mono" line, very translucent in color to disappear well in water. I wouldn't fish over a four-pound test, since the primary objective is to get the line floating well with the current. And there is no need for a sinker or swivel.

In trouting this way, your biggest asset is the current. Usually the smaller brooks, like the one described in this article, will provide you with an opportune current. Being smaller and narrower, the momentum of water-flow is naturally greater.

As far as baits are concerned, I've found that after fishing many small streams, the magic word is "redworm"—and the redder the better. That decision took quite a while, well after many hours of threshing through underbush trying everything from salmon eggs to dry and wet flies. Redworms and swift currents, where the only passable way is down, just act well together. But remember now, I'm talking about exceptionally small streams, wilderness ridden, and inhabited by trout that came there via the egg. Streams like this don't exist just around the corner. Although Bobbitt's Creek passes under a state maintained highway at one point, I've yet to catch any trout in that immediate area. We had to get back into the stream's headwaters for trout.

The remainder of Larry's and my day on Bobbitt's Creek went well. He caught four more rainbows to go along with the nice 14-incher he caught that morning. I caught two more rainbows about 12 inches long. It was getting dim, so we slipped out of our packs and built a small fire beneath a huge poplar tree in a bend of the stream. Taking four of our day's catch, we ran stakes over the fire and had fresh trout for our evening meal. Then we sacked out, exhausted, to the quiet sounds of the brook and random rushes of early spring winds.

The following morning, after two more fresh rainbows for breakfast, we packed our rods on our backs, shed our boots for shoes, and set a course that would take us back to where we had parked our car on Route 52.

"Well, what do you think?" I said to Larry as we pushed our way along in the early sunlight.

"I never would've believed it," he answered, looking toward the little stream a few yards to our right. "But listen, I know of this little stream in Pittsylvania County . . ."

A Look at the 1970 Deer Season (West)

By JOE L. COGGIN

Research Biologist

THERE are a few differences between the outcome of the 1970-71 deer season as compared to the previous year's data. However, both years did produce a good harvest of deer which were in good physical condition even though they averaged a little smaller this year than last year. Summary of the 1970 data and factors which influenced the harvest are as follows.

The Season

The type of season in 1970 west of the Blue Ridge was a two-weeks gun season which opened November 16th and ended November 28th. Doe hunting was permitted on the last day in 13 counties north of and including Giles County. Buchanan County had "bucks only" hunting for the first time in recent years, and Clarke County changed from a "two-week one day doe" season in 1969 to a "two-week bucks only" season in 1970. This made a total of 18 counties with a "bucks only" season. The archery season was an "either sex" season which opened October 15th and closed November 13th.

Weather

There was very little difference between districts in the type of weather we experienced during the deer season in 1970. The main hunting days, so far as harvest is concerned, were very good hunting days. The first day was cooler than either of the two Saturdays or Thanksgiving Day, but no precipitation fell on any of these days.

Temperatures were mostly between 40 and 50 degrees, but were lowest during the first three days of the second week, when the thermometer went below 20 degrees in most areas even during the early afternoon hours. Some snow flurries took place during the first day of the second week. There were some light rains during Thursday and Friday of the first week.

The weather was not quite as good as during the 1969 season, but only four days can be considered poor hunting days.

The Harvest

The total decrease of 458 deer (3.9%) below the 1969 harvest is so small that there is really no need to try to explain it. This is especially true since 1969 produced the highest antlered deer kill and also the highest buck kill that has ever been recorded! This past season falls second only to 1969 in antlered buck harvest and third in buck harvest.

The most interesting fact about the decrease is that it occurred in the buck population. We had a 2.9 percent *increase* in the doe kill. This is important because the doe season was placed on the last day in 1967 to conserve does. The fact that the doe kill has now increased is very strong evidence that this is working, because there had to be comparatively more does available in 1970 for this increase in kill to occur. The doe kill was 24 percent of the total kill in those counties that had a doe season.

The antlered buck kill was 4.5 percent below the 1969 harvest. Kill figures by county are listed at the end of this report.

The bow kill was 279 animals.

Herd Condition

The following chart shows the data needed to give us insight into the production and physical condition of Virginia deer herds for the last four hunting seasons. The data was taken on six check stations which represent the "bucks only" counties and sixteen check stations from the thirteen counties that permitted doe shooting on the last day during the 1970 season.

SUMMARY OF DATA COLLECTED DURING THE 1967-70 DEER HARVESTS

Classification of Data:	1967	1968	1969	1970
Total deer examined	1,678	1,246	1,883	1,572
Total does examined	747	429	645	567
Hog dressed wt. of 1½ yearl. bucks	87#	95#	95#	88#
Percent spikes of yearling bucks	56%	42%	37%	50%
Percent fawns in total bucks	26%	16%	16%	17%
Percent fawns in total does	27%	32%	29%	28%
Percent fawns in antlerless deer	46%	48%	46%	45%
Percent yearlings in adult does	37%	45%	49%	38%
Percent yearlings in adult bucks	54%	53%	53%	67%

There were 1,494 deer checked in the counties that had a doe season. The 499 yearling bucks averaged weighing 87 pounds per animal (hog dressed) and 51 percent of these deer had spikes. This is a little below the quality deer we prefer, but the production figures are good in that 28 percent of the does were fawns and 45 percent of all antlerless deer were fawns. It should be pointed out here that these deer were produced by two consecutive poor mast years.

The following chart presents good evidence of the value of "percent of fawns in antlerless deer kill" as a production indicator. It will be noticed that in all cases, except in 1967, the kill increased or decreased the year following an increase or decrease in fawn production. The decrease in the fawn production in 1970 of only one percent as compared to 1969 probably indicates that the kill in 1971 will be very little different from the kill this year, so far as the influence of the production factor is concerned. It seems worthy of note that the highest percent of fawns in the antlerless deer kill on record (48%) occurred in 1968; and the highest antlered deer kill on record since 1947 occurred the following year, 1969.

PERCENT FAWNS IN ANTLERLESS DEER KILL COMPARED WITH ANTLERED DEER KILL 1962-1970

	% Fawns in Antlerless Kill	Total Antlered Kill
1962	41%	
1963	44%	6,310
1964	46%	6,973
1965	42%	7,301
1966	44%	7,122
1967	46%	6,664
1968	48%	8,383
1969	46%	10,089
1970	45%	9,516

The sample from check stations in "bucks only" counties (District 7) was relatively small—78 antlered deer. The average weight of 19 yearlings was 95 pounds per deer. Thirty-eight percent of the yearlings had spikes. This is an improvement in deer quality since 1969 when the average weight was 90 pounds and antler development was 52 percent spikes.

Hunting Pressure

It is very difficult to relate hunting pressure to total kill because so many other factors cause fluctuations in the harvest. Hunting pressure this year increased by 10.4 percent to an estimated total of 183,824 hunters.

Since 1963, the hunting pressure has increased almost 10 percent per year as calculated from damage stamp sales in 13 counties west of the Blue Ridge. Hunter success was 7.2 percent.

Deer Population Estimation

The estimated pre-season deer population was 88,103 animals. We harvested 15 percent of this estimate.

Summary and Conclusions

1. During the 2-weeks season west of the Blue Ridge, 18 of the western counties had a "bucks only" season and the remaining 13 counties had one antlerless deer day on the last day. This is the same as the 1969 season, except that Clarke County had "bucks only" shooting this year.

2. The total legal harvest was 13,226 deer, a decrease of 2.9 percent (458 animals less than the 1969 harvest). The bow kill was 279 animals, 81 more than in 1969. The antlered buck kill was 4.5 percent less than in 1969, with a total of 10,441 animals harvested. In the 13 counties that permitted a doe harvest on the last day, 24 percent of the total kill were does.

3. Production indicators suggest that deer production remained stable in 1970 compared to a year earlier. The condition of the herd is fair in that the average weights of hog dressed bucks was 88 pounds but with 50 percent spikes. In the "bucks only" area the average weight was 95 pounds with 38 percent spikes. This is a good improvement over last year for District 7.

L. L. Rue III photo

Analysis of last season's results indicates hunter pressure up, production and harvest relatively stable, and herd condition generally fair.

In District #7 it should be noted that the antlered buck harvest is now up to its highest peak on record, except for one year—1959, and the harvest was only 19 deer below that record.

4. Hunting pressure increased 10.4 percent in all counties west of the Blue Ridge. Hunter success for all counties combined was 7.2 percent.

5. Generally speaking, the entire season can be characterized as having good hunting weather. There were four days that could be described as poor for hunting due to light rain and low temperatures.

6. The total kill was 15.0 percent of the pre-season population estimate.

7. The present season in those counties where doe deer are being harvested on the last day still appears to be a good one, since the decrease in harvest was very small and there was an increase in the doe harvest.

Sound of the Orchard Oriole

By MARY STEVENS JONES

Culpeper

LAST spring I became suddenly aware of a new song amid the medley of birdsong on Jameson's Hill in Culpeper. Clear as a flute and indescribably sweet, it fascinated me so that I spent many hours trying to identify it. This wasn't easy because it was weeks before I saw the songster and with the help of several bird books identified it as an orchard oriole.

Modest and retiring, he is as elusive as the Scarlet Pimpernel. Any public appearance on his part is completely accidental. The oriole seldom visits the ground or a low perch and has been known to hang his beautiful basket nest as high as 40 feet from the ground.

As long as he is unaware of an audience, he sings with gay abandon—always the same little song, with clear liquid notes that bring a quick lift to the heart of the listener. It consists of three notes—the first two the same and the third slightly higher—followed by several notes that run together into a trill. Peterson's *Field Guide to the Birds* calls it "a fast-moving joyous outburst."

Like Browning's "wise thrush," the oriole, too, "sings each song twice over, lest you should think he never could recapture the first fine careless rapture." Also, like the thrush, he sings more sweetly at dusk.

During several weeks of hearing the song almost continually, I did a lot of unrewarding bird watching. It was indeed frustrating, for as I chased him through neighborhood yards and gardens, he changed his treetop location more rapidly than I was able to run. I could never see a sign of movement when he was in flight, and it was exactly as if a ventriloquist had thrown his voice to another tree as soon as he saw me gaze up into the one in which I was certain he was singing. I dubbed him "that demned elusive Pimpernel" and half expected to find he was scarlet in color.

Finally, about dusk one day in Mid-May, I heard him singing Evensong from a lofty perch in our back-yard walnut tree, stole out silently, and spied him sitting alone in his choir stall. There was no doubt about his being a male orchard oriole. He's a fairly small bird with a short tail —modest in plumage as well as manners. His overcoat is dull black; his vest, chestnut colored with a hint of muted yellow; and short white cuffs showed on his wing tips as he flew. The female dresses demurely in yellowish olive green with dull black and olive markings and white wing bars.

I remembered the orchard's oriole's appearance from one long-ago summer when a pair nested in a tall pear tree near the garden gate at my home in the country. I also have a vivid recollection of their nest which to a 10-year-old child was one of seven wonders of her small world. A basket-shaped structure, it seemed to be half-hanging, half-anchored to the tree as it swayed slightly in the breeze. At summer's end and after the baby birds had flown, it was removed from the tree for us to examine and marvel at the workmanship of the builders. Orioles are skilled engineers, craftsmen, artists and architects, as well as concert singers.

Beautiful in color, proportion and finish, their nests are made of grass and stalks skillfully woven into a pouch and lined with soft feathers. The book, *Birds of America*, tells of someone's finding an orchard oriole's nest that had a 13-inch-long strand of grass which had been woven through and through the basket 34 times. Could it have been orioles who taught basket makers their trade?

Never since that childhood summer have I seen an oriole's nest. Nor had I seen an oriole to recognize it until this summer. The orchard oriole is a rarer and a more modest bird, we are told, than the spectacular Baltimore oriole. It often builds in orchards because the insects found around fruit blossoms are its favorite food. Orioles' appetites also call for plant lice, small caterpillars and some wild fruits.

By late June, the orioles were no longer heard or seen on our street. Papa and Mama had raised their brood, the fledglings had flown, and we should not hear that sweet song until next spring, we surmised.

Then, in mid-August, we were surprised one day to hear the "fast-moving joyous outburst" sound again on the soft evening air. The orchard oriole, either with or without his mate, was back again! His song was as enchanting and he was as elusive as ever. Although we continued to hear his song for several days, only in early morning and at dusk, he kept his distance, never entering the yards on our street, yet certainly revisiting some of his haunts of early summer. Now he has gone again—to return next spring, we hope.

Why he revisited our neighborhood is only one of the oriole's secrets. He has left us wondering about many things.

Where on Jameson's Hill did he hang his beautiful basket nest?

Does he sing only during the mating and brooding season?

When the little yellow nestlings, after being cradled high in some swaying tree and nourished on insects, grow up and fly away, where do Papa and Mama go then? Once they have found a pleasant neighborhood, good for raising a family, do they return year after year? And do they look upon us mortals as the friends and neighbors we should like so much to be?

Was that joyous outburst we heard on several successive August days the oriole's farewell to summer? Or to his friends on Jameson's Hill?

Did he fly many miles to revisit Culpeper-on-Mountain Run, still the "high and pleasant situation" it was called by the town's Founding Fathers more than 200 years ago? Did he bring his mate with him, or had he already sent her south for the winter?

Have orioles been building in Culpeper all these years, we wonder, and does the little songbird I glimpsed in the walnut tree have its ancestral roots here as do some of the rest of us?

These are some of the things we shall never know. And that is well, for the unfathomable mysteries of the bird and animal kingdoms add to their enchantment. The oriole will remain one of God's miracles, proof that He created, controls and orders the universe. And mere man cannot reproduce the oriole's kind, or that of any other of our furred and feathered friends; cannot acquire their native gifts, or fathom their fascinating secrets.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

ESSAY CONTEST PARTICIPATION SOARS. An impressive 40% increase in the number of schools participating in the annual Wildlife Essay Contest was noted this year, indicative of the ever increasing interest in environmental problems. Papers written by students in grades 5 through 12 for the contest were initially judged at Izaak Walton Chapters throughout the state following the close of the contest on January 15.

The subject of the 24th annual Wildlife Essay Contest, sponsored jointly by the Commission of Game and Inland Fisheries and the Virginia Division of the Izaak Walton League of America, was "Wildlife's Future with the Expanding Human Population."

ACCIDENTS CLAIM 4636 DEER, 18 BEAR. Various types of non-hunting mortality claimed at least 4,636 deer in Virginia during 1970, with the trusty automobile claiming 3,120 of the reported total. This is nearly 1,000 above last year's reported toll, almost all of the increase due to more highway kills. Eighteen bears were also killed other than by hunting, with vehicles again claiming a large number. Also tallied were 61 turkeys, about two-thirds of them illegal kills.

Illegal hunting kills were the second greatest cause of deer losses, with 1,221 documented during the year. These include deer confiscated in court cases as well as some found dead of gunshot wounds where illegal activity is suspected. Fences claimed 115 deer who became tangled and could not free themselves. Usually the back legs hang in the fence as the deer jumps, suspending it in a position where it is nearly helpless to free itself. Free running dogs were credited with killing 79 deer.

Fluvanna County led the state in non-hunting deer losses, with 204 reported during the year. A number of these were struck by vehicles on the newly opened section of Interstate 64. Other counties in the Central Piedmont also had high totals. The highest loss west of the Blue Ridge came from Rockingham County, where 136 deer were reported.

OVER 13,000 ACRES FOR WILDLIFE. Over 13,000 acres of land on Game Commission Wildlife Management Areas and cooperatively managed State and Federal lands were modified for the benefit of wildlife during the past fiscal year. Of this total, 3,841 acres were planted to specific wildlife foods, 7,132 acres were modified by burning to stimulate the growth of game foods, and 2,208 acres were disked or mowed to encourage desired food plants. An additional 61,600 food and cover trees were planted on these areas.

TURKEY RESTORATION CONTINUES. A total of 532 wild turkeys have been trapped from the Game Commission's Gathright Wildlife Management Area and released to establish new flocks around the state since 1955. With western counties apparently headed for another record turkey kill it is difficult to realize that the restoration of this fine game bird still continues in some parts of the state. The birds have been brought back to most of the southwestern Virginia counties during the 15 year trapping and transplanting project financed largely by hunters' license moneys. Most of these counties now have spring and/or fall seasons. Stocking is currently concentrated in Dickenson and Wise counties in far southwestern Virginia.

Virginia's trapping success has been phenomenal and has been studied and envied by most other states attempting to relocate turkeys. The Gathright Management Area in Bath and Alleghany counties has supplied all but 88 of the birds which have paid such handsome dividends to the state's sportsmen.

Starfish are among the many favorite foods of gulls in the shallows as they patrol the beaches.

BEACH

Text
By ST
Clemmons

DUSK was falling as I walked up the nearly deserted beach, but even in the rapidly fading light I could still see the birds. They were seagulls—dozens, hundreds, perhaps even thousands of them—resting on the sand just out of reach of the incoming waves.

I had learned they came to this deserted beach each evening and had come to see them, possibly to count them. But counting, I saw immediately, was impossible, for more gulls came in each minute. I spotted an old man standing back on the beach behind the birds and walked up to him.

"Really something, isn't it?" he asked. "Every evening they come here, just like clockwork. Been doing it for the last 50 years, too, ever since I came here as a little boy.

"Funny how everyone just seems to take seagulls for granted," he continued. "I mean, they're always there, somewhere, flying over the water, following a ship, or just out beachcombing. Nobody pays them any attention, but if it weren't for seagulls none of our beaches would be as clean as you see them now."

I could see the old man was warming up to his subject. "They're scavenger birds, you know, and eat all the garbage we humans leave behind. They must know they have a good thing going, following us around all the time.

"You really ought to take time to study seagulls. You might learn something interesting."

That was the last time I saw the old man, although I visited the beach several more evenings to see the gulls. I took his advice, too, and started studying seagulls.

Digging into my bird books, I discovered there are many different species of gulls, although the varieties most often seen along the Virginia-Carolina coasts are the herring, ring-billed, laughing, and black-backed gulls.

The brownish to slaty-gray herring gulls are the most common, while the larger black-backed gulls seem to be the monarchs of the tribe. Graceful in flight, majestic on the beaches, they are loners, and do not socialize nearly as much as do the smaller herring gulls.

They are all scavengers, as the old man had told me that evening, but their diet includes a wide variety of sea food as well. Many times I watched as the birds patrolled the beaches in search of clams, sea snails and starfish that had washed in with the tide. Other times I saw them dive into the breakers for small fish. And once, fishing off a great steel pier, a gull tried to steal my shrimp bait even as I cast.

In the Midwest, gulls occasionally follow farm tractors and eat fish or fish refuse spread out as fertilizer. Once along the Weber River of Utah, gulls were seen so stuffed with grasshoppers the insects were visible when the birds opened their mouths.

Left: a solitary black-backed gull. Right: Several gulls wai

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An immature herring gull stretches graceful wings while watching for anything edible cast up by the surf.

As well as being scavengers, seagulls are the robber barons of the high seas. I don't know how many times I've watched one herring gull dive into the water and emerge with a small morsel in its beak, only to be attacked immediately by another gull wanting that same morsel.

I've watched them dive and swoop and roll like fighter planes, screaming all the while, as the robber tried to force the other into dropping his prize. It's comical in a way, for this seems to produce no ill-feelings among the birds. Once a morsel is dropped, the victim usually flies away and resumes his fishing without a second thought.

The great black-backed gull usually remains clear of these antics, and is somewhat immune to robbery due to his great size. With its pure white tail, white head and glossy black back, this bird looks strikingly like the bald eagle. In nesting, however, this bird does not hesitate to steal and eat the eggs of other gulls.

Many of the species of gulls breed in colonies, always near water. The nests vary, but are generally poorly made out of rotting tree branches, grasses or even old molted feathers. On the ground, the nests are placed wherever there is room—in the open sand, on rocks, on cliff faces, even in small holes. One ornithologist many years ago reported finding four herring gull nests on Isle Royale in Lake Superior, built on the ice formed on the rocks by the constant lapping of the winter waves.

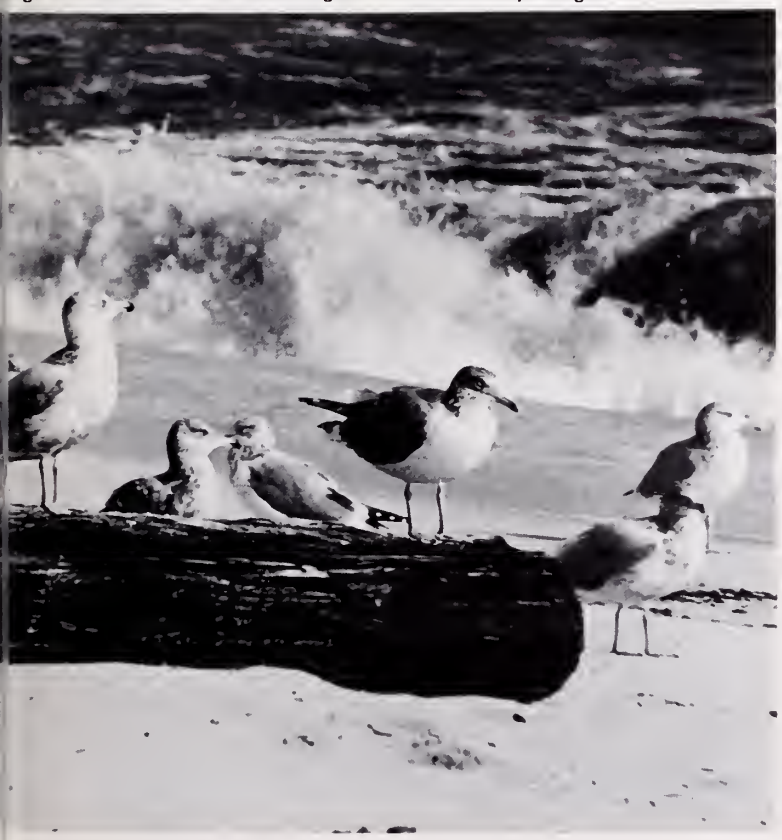
One brood of baby gulls is usually raised a season, but if the nests are robbed, the birds will continue laying all summer. The young birds—usually three—are fed for about five weeks, or until they can fly.

Seagulls are known as soaring birds, for they most often are seen gliding gracefully, almost effortlessly, over the water or behind ships, scarcely moving their wings. They are riding the air currents—thermal updrafts—rising off the water when the air temperature is colder than the water temperature.

As the cold air is warmed by the water, it rises, creating the perfect highway for the gulls. If the wind strengthens, it occasionally blows these warm thermals over until they actually lie horizontally above the water. Several of these horizontal thermals being blown around together produce a ridge of rising air on which gulls can glide in a straight line.

Many times I have seen gulls by the hundreds following a fishing boat or ferry, taking advantage of another similar type of air current. They are riding the rising air currents created by winds striking the sides of the moving vessel. These winds bounced off solid objects and deflected up-

og, ever watchful for an evening meal the tide may bring in.



Beach Patrol (Continued from page 15)

wards are known as "obstruction currents."

Thinking back to those evenings I watched the hundreds of seagulls congregated on that deserted beach, I often wondered what natural enemy these birds might have. Certainly man, with his multitude of electric powerlines, would have to be one. Another enemy, strangely enough, is a fish.

It is the Angler Fish, a big, heavy monster that seems to be a cross between a shark and a Southern catfish. Found from Newfoundland south to Cape Hatteras, this creature has a mouthful of toothy hardware even an alligator would envy. Both jaws are hinged to depress backward toward the Angler's throat, making the entry of food easy but exit nearly impossible.

One fall morning several years ago several hunters were crouched in a rowboat in Raritan Bay, New Jersey, waiting for the first flight of ducks to come in. Before they saw ducks, however, the hunters suddenly saw something they

Young girl feeds ever-present gulls, and pigeons, at water's edge.

must have found hard to believe. Thrashing wildly in the water a few feet away was an Angler Fish with a mouthful of feathers. It seemed to be in mortal agony.

The hunters hoisted the three-foot fish into their boat and discovered a large herring gull stuck in its throat. Despite its 10-inch wide mouth, the fish had been unable to completely swallow or disgorge the gull, which had apparently been caught as it floated asleep in the water.

Despite the dangers of the Angler Fish, many seagulls probably live to a ripe old age. One gull, easily recognized by its distinct markings, voice and disposition, visited the neighborhood of Narragansett Bay, Nova Scotia, each winter and spring for 24 years.

I've often wondered if those hundreds of gulls I watched on that deserted beach weren't just talking to each other about their own 20-odd years of beach patrolling experiences!

HOME— Is a Place to Stay

By KATHERINE W. MOSELEY

Rixeyville

JUST as some members of wildlife thrive on travel and adventure, there are many others who are ill at ease away from their familiar range. When the non-wanderer leaves the haven of home with the sights, smells and sense of security, it becomes restless and apprehensive as though it had violated some instinctive law of its nature. This is understandable as unfamiliar country means exposure to unknown enemies, ignorance of places to dodge and hide, and unlearned sources of food and water.

A home is necessary to the stay-at-homes as a place to sleep, to breed, and as a fortress of protection. As with humans there seems to be an empty loneliness without the constancy of the familiar. It is perhaps anthropomorphic to suggest that like human home-owners there is more permanence to an animal's life if it has expended time and energy actually constructing the home it calls its own.

Home can be a hole in a tree chiseled out by the cutting beak of the woodpecker; home can be a trashy pile of leaves chocked and strongly constructed in a crotch of a sycamore tree that the crows use for a season or a generation. Home can be a natural hole in a tree that flying squirrels have gnawed to suit their family needs.

Holes and burrows are the two main kinds of permanent animal homes. The perfect hole is a cave, sturdy and well insulated. A single cave may be home to snakes, rats, lizards, insects and larger animals. Some cave-dwellers use the home only in the winter time such as the she-bear who seeks a well protected spot to hibernate and bear her young. Black bears seldom leave their home range within a radius of ten to fifteen miles. They may gradually shift areas but thirty miles is about the limit.

The hollow of a tree is a natural hole and well thought of as a home as it is safe, comfortable and dry. It is usually a "found" home, not handmade, and if large enough serves as a seasonal refuge for raccoons, opossums, some squirrels, skunks and foxes.

However, many resident owls use natural holes in dead trees as permanent homes. The screech owl prefers an old hole made by a woodpecker but will use a natural cavity. The great horned owls like hollow trees as do the barred owls. The long-eared owl takes over an old nest, usually that of a crow or squirrel, in an evergreen tree.

Woodpeckers chisel out excavations in trees to make their own holes. These may vary in size from the large opening cut by the flashy, crow-sized pileated to the small home of the downy. The pileated drills its nest high in a dead tree or a living tree in which it has found a knothole or a soft spot in which to begin. Frequently the nest hole may be three feet in depth. The pileated also uses its stout hammer-like beak to make feeding holes in which to feast on wood-borers and larvae at all seasons. All of these holes are a great boon to hole-loving birds that lack the sharp beak to make the excavation. Invariably each bird that uses a ready-made home adds personal linings suitable to its needs.

Mink, at home in hollow log.

Squirrels are usually home-territory animals unless they become so abundantly numerous that food is scarce. At such times there may be emigrations. The gray squirrel seen most often in our Virginia countryside is thoroughly arboreal. They make their nests in hollow treees or in the tops of trees. The outside of the tree nest appears deceptively flimsy, bulky and untidy. It is built on a foundation of small sticks with a rounded top of leaves and is lined with shreds of bark and moss or other available soft material. In the fall the squirrels add extra twigs of dried leaves, undoubtedly for winter insulation. During severe cold they remain hidden in the nests.

Of all the homes constructed by mammals the most typical is the burrow. It may be a hole in the ground with side under-earth passages such as the woodchuck digs. Woodchuck holes may be abandoned but not until after each has been home for many years and the nursery for many broods of young.

Burrows dug by moles are of amazing engineering skill. Beneath the mound of the mole run there is a nest with tunnels slanting downwards away from the nest and to an exit. There are other tunnels that provide routes to the blind, under-earth creature's hunting grounds. Moles can dig very fast and are considered nuisances but they plow and make mellow much impacted, useless ground as they search for insects and worms. It is a rather marvelous little creature with its soft smooth-furred body, pointed head and front paws shaped like shovels with strong claws. It works underground like a swimmer pulling itself along, one paw over the other. With constant strokes it creates a subterranean highway of runways and turnoffs.

Young flickers, at home in tree cavity.

Rue photos

Moles and gophers live underground almost entirely, emerging only at intervals. The pocket gopher can dig a tunnel two hundred feet long in a single night. These underground tunnels are ingenious in that they seldom rise or sink beyond the standard depth in which they were dug.

The Eastern chipmunk stays close to the area it calls home and lucky are humans with them about with their gentle grace, beauty, and vivacity. They too make burrows and skillfully hide the entrance. There is a sloping passage down to about five feet, then several rooms are excavated and a back door opened for a hidden exit. One of the rooms is a nest, several are for food storage and one is the toilet. The chipmunk is not a true winter hibernator as it appears to scurry about in mild winter weather. The chipmunk uses its home the year around for shelter and as a retreat to the cool earth on the hottest days of summer.

A field mouse may never venture more than fifty feet from its door in all its life while its kin, the white-footed mouse, is a traveler of many miles. Field mice have runways to their burrows and each burrow differs in some way from that of other field mice. Some choose dry, grassy land; others like marshy areas. The burrows are all kept clean and free from obstacles so that the owners, when alarmed, may run swiftly to shelter. Eternal vigilance and distrust of any and every thing is their only defense.

When the beaver builds its home, an entire area may be changed. The beaver is not just a carpenter but is also an engineer. As it constructs a home on a river or stream, it may erect a dam, dig a canal, and cut down sizeable trees as well as saplings. It drags the larger tree trunks into the water where they are anchored with stones. This process is repeated many times. Finally, a great mass of tree trunks lies across the water and it is plastered with mud, stones and sticks until it is a tight, solid wall. After the dam is built the lodge is added. The entrance is a narrow shaft curving upward. The living quarters are above water and often contain several rooms, a nursery and snug bedrooms. Beavers may add new logs to their dam year after year. They desert the home only when the stream becomes too silted with mud for the deep water needed. Where beavers continue to occupy a stream, they make regular trails and form a slide on the stream or river bank on which they glide down young saplings for winter food and green stalks in summer if there is a neighbor with a cornfield anywhere close.

Otters, muskrats and mink build dens in the banks of rivers, lakes or ponds with an entrance to the den that generally opens into the water. The otter is less inclined to wander than are the others but is outnumbered by the muskrats.

Animals behave in a bewildering variety of ways with no two species alike. Every animal leaves one place and travels to another whether the journey is only a few inches, a mile, or a thousand miles. This is one of the complexities of animal behavior. A home, as such, is unwanted by some but necessary for others. Many species will make an extraordinary effort to return to homeland if it has been removed. Each species seems to have developed a pattern of behavior best suited to its needs. To ever understand why animals act as they do it is essential to separate the innate from the learned.

Pheasants As a Farm Crop

By DENNIS HART

Supervisor, Foreign Game Program

Photos by L. L. Rue, III

AS was stated at the conclusion of a previous article ("Pheasants—New Game Crop in Virginia." *Virginia Wildlife*, March, 1971), pheasants are demonstrating in Virginia, as they have elsewhere, that they can become adapted to new localities and environments, including the game farm, without becoming tame.

Doctor Edward L. Kozicky and John Madson, in *Shooting Preserve Management*, have written of the Chinese ringneck pheasant:

> "Of all the game birds in the world, the . . . pheasant is the most able to stand the indignities of artificial propagation and yet perform like their wild cousins when released in the field.
>
> "He is a big rugged bird that isn't spoiled by the modern gadgets of game breeding; he reverts to the wild as soon as he slips the bondage of wire netting. At heart he is a wild creature and he stays wild. His sense of survival among men has been honed razor sharp through centuries of living in hills, fields, and rice paddies of teeming Asia. He has thrived where less hardy birds have perished.
>
> "Other game birds will domesticate in captivity, but not the gaudy . . . (pheasant). All he asks is enough space so that he is not crowded, and a chance to exercise his legs and wings for his break with captivity. There is nothing man can offer him that is more precious than his freedom."

What Kozicky and Madson have written about the Chinese ringneck can also be said of its close relatives, the eastern and western Iranian blackneck pheasants, *P. c. persicus* and *talischensis*, the subspecies which now constitute the main breeding stock at the State Game Farm.

Because of the persisting wildness of *Phasianus*, game people from time immemorial have been able to *farm* these birds with great advantage to hunters. European and British estate owners introduced and established pheasants centuries ago. And now, by their being established from east to west in America, pheasants have encircled the world. Basically, the same methods that produced establishment in other lands are now accomplishing their spread in a widening band across America. Game preserves and state game farms afford hunting of these imported birds and constitute seed stock reservoirs from which additional areas may be "seeded."

Pheasants are both wanted and needed in Virginia. They appear to be the best non-native upland game bird in the world for fitting into our modern agriculture and themselves being treated as a farm crop. Sportsmen and farmers are mutually and reciprocally motivated toward the management of pheasants to provide the maximum of good hunting. To this end, they work together in the planting of both annual and perennial feeding areas and the setting aside of nesting and resting areas. Farmers are easily induced to give pheasant production some consideration in farm plans.

The Soil Conservation Service advocates provision of wildlife habitat as an integral part of plans for individual farms, in ways which help rather than hinder overall farm productivity.

The Virginia Farm Bureau, representing over 22,000 member families statewide, has adopted a policy at its recent annual convention designed to promote "game as a farm crop." This policy resolution as officially set forth in the Virginia Farm Bureau News, December, 1970, reads as follows:

Official Farm Bureau Policy for 1971

GAME AS A FARM CROP

One of the most popular Virginia outdoor activities is the hunting of upland game (quail, rabbits, doves, grouse, pheasant, etc.). As the pressures of population and intensive cultivation of land increase, the opportunity for such sport on the part of many people becomes more limited.

Under programs followed by the Virginia Commission of Game and Inland Fisheries, new varieties of game are being successfully introduced into certain areas of Virginia. We believe that such programs should be encouraged and the farmers should avail themselves of new opportunities to increase their incomes by cooperative programs of game stocking and propagation and through offering opportunities for controlled hunting in their fields.

We recognize these opportunities to make wild game

a farm crop that may be harvested and seek to develop a working relationship between farmers and the qualified technicians of the Virginia Commission of Game and Inland Fisheries, which will be mutually beneficial to landowners and sportsmen.

Hunter demands and public interest will doubtless continue to guide both the Game Commission and private enterprise in their respective roles in providing game as a farm crop. These demands and interests point to two primary needs: (1) augmenting of annual crops of game, and (2) opening up of more land to hunting.

Encouragement of private game breeding and shooting preserve operations, to include put-and-take pheasant shooting on private land, can go a long way toward meeting both of these primary needs. This offers the best chance for breaking the bottleneck of inaccessibility of hunting on private lands. Leadership for private game farming can be furnished by the state, in the form of demonstrated game breeding techniques and strains of breeding stock superior to any heretofore available for use in Virginia.

In addition to providing a source of wild breeding stock, modern game farming is designed to provide annual harvests of game above and beyond merely skimming off the ecological increment and, also, without "mining" the basic resource. Ecological manipulations cannot always meet hunter demands. Maximizing of field shooting can be effected by superimposing augmented populations of selected species upon the ecological base. Three things are necessary.

First is full UTILIZATION OF REPRODUCTIVE CAPACITY. In game farming, with particular reference to the pheasant-partridge family, the rate of reproduction is ordinarily quadrupled or quintupled over the wild norm. This is accomplished simply (1) by removal of eggs daily so as to substitute continued egg laying for the normal onset of clutch incubation and (2) by expertise in nutrition, artificial incubation and brooding, and the conditioning of reared birds for return to their normal place in the coverts.

Of all the game birds in the world, members of the genus *Phasianus* are best able to withstand the indignities of the game farm without becoming tame or losing their keen instincts for survival in the wild.

The second necessity is FULL DEVELOPMENT OF COVERTS FOR YIELD CAPACITY. Specialized techniques are employed for optimizing the coverts aspect of game habitat. The objective is to shelter, hide, and feed recurrently stocked birds and provide for their recovery through natural-like hunting. Here, normal carrying capacity in the ecological sense has little practical significance as a limiting factor on harvests. Nature maintains a balance among living things, but man can manipulate this balance in his own favor. He supports the basic balance, but he goes further: he is a cropper, having field crops, fruit crops, forest crops, water crops, game crops, and others. And in his cropping the objective is to make available to himself the maximum harvest that will not do violence to the basic balance. Game farming is *intended* to superimpose upon the carrying capacity (Nature's balance) *maximum annual surpluses* to be harvested by man at optimum seasons.

The third necessity is MAXIMUM ACCESSIBILITY OF HABITAT FOR HUNTER USE. Motivation for private enterprise game farming eliminates the no-hunting-on-private-lands dilemma and allows the first and second necessities, above, to come into more widespread effect. Wherever game has been taken to be a farm crop and therefore *farmed* along with other crops, farmers have protected the game against poaching and predators just as surely as they preserve their other crops from pilfering and animal depredation. And inasmuch as game is basically owned by the state, the farmer's protective concerns are made more effective through close liaison with the game warden force.

We should take cognizance here of general benefits that result from a growing farming industry. Some of these are as follows:

1. Enterprise income is provided to game breeders, shooting preserve operators, general farmers and forest land managers, dog trainers, guides, caterers, and others.
2. Game harvest ceases to be solely a matter of bag limits and hunting seasons dictated by ecological (balance of nature) factors.
3. Sportsmen can plan their hunting days with assurance of desired results at known costs.
4. Urban-rural goodwill is fostered.
5. Hunting pressure is diverted from the remnant of free hunting and from overused public hunting grounds.
6. Important contributions are made to the establishment of introduced species of game so as to broaden and enlarge cropping and harvesting potentialities.
7. Sales of hunting licenses and of hunting equipment and supplies, right down to the local level, are increased.
8. Tax revenues of various kinds from general sales taxes to the eleven percent tax on sporting arms and ammunition are increased, the eleven percent tax being earmarked for game restoration use.

The future of pheasants and pheasant hunting in Virginia clearly appears to be a matter involving not only the Game Commission, but also, and equally as much, sportsmen, farmers, game breeders, shooting preserve operators, and an intensifying public interest in, and concern for, the wildlife resources of the state.

HARE HUNT

By JAMES W. ENGLE, JR.

Supervising Game Biologist

ARE you one of the hunters in Virginia that has bagged a deer, bear, turkey, rabbit, squirrel, bobcat, gray fox, red fox, fox squirrel, skunk, civet cat, groundhog, muskrat, opossum, raccoon, otter, mink, nutria, weasel—well, you haven't completed the list until you have added a snowshoe hare (*Lepus americanus virginianus*) from the northwest corner of Highland county. There are a few people in Virginia who have had this unusual experience. In case you did not know about them—

Back on the "Big Alleghany," in the northwestern part of Highland County, snowshoe hares used to be found, and probably were fairly common up through the early 1930s. Hough Sproul of Staunton and Ed Jones of Monterey (for example) have related to the writer, in past years, experiences of hunting in that area, seeing the hares and shooting them. Handley and Patton report their Virginia presence in their book (*Mammals of Virginia*, 1947). While they examined specimens from Highland County, they mentioned they were not very common.

This part of the state is the birch-beech-maple forest type; I suspect most of our readers are more familiar with the oak-hickory or oak-pine forest types in Virginia. This section of Virginia also once had spruce forests, which were clear cut in the days of logging camps and narrow gauge railrods—evidence of which can still be seen in the hollows. A few islands of native spruce still occur through the area. The CCC boys planted spruce and larch in this area while leaving their footprints on the Virginia environment.

Courtesy *Highland Recorder*

Proof that the snowshoe rabbit is an established species in Virginia, at least in the rugged back country of Highland County.

In the winter of 1958, an opportunity was offered Virginia to obtain 30 snowshoe hares from Canada via the Cooperative Wildlife Research Unit at the University of Massachusetts. After the animals were trapped in Canada, they were held in conditioning pens in Massachusetts until all chance of death from shock or other causes was past. Then two students drove straight through in a panel truck to Harrisonburg with the rabbits, each in an individual compartment of a large box. They were met at the U.S. Forest Service Headquarters by field personnel of the Game Commission and the U.S. Forest Service. Ned Thornton, supervising biologist of the northwest portion of Virginia and John McLaughlin, at that time supervising biologist of southwestern Virginia, had made a decision to release all 30 hares at one location. The Big Alleghany was selected because it had been, and might still be, snowshoe hare habitat. A shot in the arm by restocking might just be what the area needed to bring the animals back.

The writer, Game Manager Roy Hodge, and Stan Freese of the U.S. Forest Service, loaded into a Jeep truck with snowshoes, a toboggan, shovels, and 30 snowshoe hares, headed for Locust Spring, Bear Wallow, Slab Camp hollows or wherever we could get in to release the hares. This part of Virginia has cold weather, with snow on the ground when the rest of the state does not. We did not know just what to expect. We went out into West Virginia on primary roads, then onto Forest Service maintained roads (which do not get snow plowed) until all four wheels were off the ground in the snow. When we stepped out of the truck, the snow was just as Harper Corbett, the Highland County Game Warden, had told us it would be, "up to your hip pockets."

We put the snowshoe hare boxes on the toboggan, snowshoes on our feet, and hiked back into Virginia. We settled for the closest place we could get, and know we were in Virginia, Locust Spring. We turned all 30 hares out. They would hop off 50-100-150 feet, sit upon their hind ends, wiggle their noses and ears, look at us, and hop on. We wished them luck, and hoped we would have some, too, in getting our 4x4 unstuck from the drift where it had been left. It took some digging with shovels, but we got out and back to Staunton late that evening.

The interest generated by this release soon died down, and little public comment on it has been heard since. However, rumor has it that the snowshoe hare hunting over on the West Virginia side of the mountain picked up shortly thereafter, and we have been getting credit for it. Maybe so; maybe an upswing in the cycle of their native population was the cause. West Virginia prescribes a snowshoe hare season, meaning the Mountaineer State knows they exist in parts of their state.

The writer has made several excursions into the area during hunting seasons with friends and beagles. One trip produced wonderful "grey rabbit" (cottontail) hunting. As any rabbit hunter knows, the cute little beast will run in a circle when beagles get after him. On one trip over there the boys and eight dogs were in a thick spruce thicket. Roy and I were leaning against trees out in the open woods on the opposite side of the hollow enjoying the music of the chase. We would hear the "BOOM" of a gun, and the dogs would keep on. Roy's comment was, "Hugh, if those guys can't shoot any better than that, I'll go help them out." We

soon found out. We had trouble locating an open spot in the thickets to give us sufficient distance to shoot at a rabbit without blowing him to kingdom come. After hearing Roy shoot one time and the dogs keep on going, I went up to find Roy and see what was the trouble. No trouble! He had killed a "grey rabbit," but rabbits were so plentiful in that thicket the dogs momentarily dropped the chase, picked up another trail, and were off again. After twelve grey rabbits were bagged, we had to lead the dogs out on leashes to make it back to the cars without the dogs taking off on another chase. We wanted fun, but we also wanted to collect a snowshoe hare. Later trips back in that area never produced another hunt as good as that one.

Our employees and co-workers continued to keep their eyes open when over in that back country, and would occasionally report finding a snowshoe hare track. Numerous trips produced enjoyable times and good companionship, but no snowshoe hares.

In the winter of 1969-70, reports began to filter back of an abundance of snowshoe hare tracks. One trip produced a short chase using one beagle and a bluetick hound. But there was four inches of powdery snow on the accumulation of ice and snow, and the dogs could not carry the track. Six of us with ten beagles returned on the following Saturday, only to find an ice crust. (I'd left Richmond the day before where suit coats were all that were needed.) I saw tracks and snowshoe trails (yes, trails) in the spruce thickets. Snowshoe hare tracks were plentiful in the middle of the spruce thickets. Around the edges of the thickets and into the open hardwood were only cottontail tracks. I did find pealed limbs of red maple in the spruce thickets, evidence of snowshoe rabbit feeding activities.

We also found deer, fox, and bobcat tracks. It is an interesting experience, leaning against a northern red oak, thinking how the temperature in Richmond must be 50 degrees and here you stand in 20 degrees on an accumulation of three feet of snow, listening to the wind in the trees and the crack-crack of frozen tree trunks as they twist in the wind. I thought of the nutria I had seen swimming in Back Bay just a few weeks before. Yes, there is a great variety of wildlife to be found in Virginia.

We met four other men and five other beagles out on the Big Alleghany that day. Their dogs could not carry a track in the ice conditions either. Ten hunters, fourteen dogs, and no snowshoe hares! It was sort of discouraging.

All was not lost. Highland is a county of low human population, but has a way of getting the word around. On January 26, 1971, George J. Colaw, Blue Grass, Virginia, was hunting with a party on the Big Alleghany. They bagged three snowshoe hares. George notified Game Warden Tuck Arrington, who phoned me. George donated one of his snowshoe hares to us for scientific and authentication purposes. Its measurements were right within the limits reported for snowshoe hares. It weighed 58 ounces in its frozen condition three days after death. Its weight might be a little light. It may be a young of the year. It still was heavier than both the minimum of 32 ounces and maximum of 49 ounces which Game Biologist Max Carpenter has recorded in recent years for cottontails from the Blue Ridge and the Shenandoah Valley.

This specimen will be mounted and placed on exhibit with other specimens of wildlife in the entrance lobby of the Commission of Game and Inland Fisheries building in Richmond.

DANVILLE DOCTOR FILLS COMMISSION VACANCY

Allan A. Hoffman, M.D.

DOCTOR Allan A. Hoffman of Danville was appointed by Governor Linwood Holton to fill the unexpired term of J. C. Aaron of Martinsville who resigned from the Commission of Game and Inland Fisheries last December.

Doctor Hoffman owns a farm in Pittsylvania County. He has hunted and fished extensively since childhood, and is frequently seen along the Dan River during annual striped bass runs, trout fishing in Patrick County, or bass fishing in Pittsylvania County farm ponds.

Doctor Hoffman is in private medical practice in Danville in the specialty of urology, and serves as Attending Urologist and Chief of the Artificial Kidney Service at Memorial Hospital in that city.

He is a member of the American Forestry Association.

Bird of the Month:

By JOHN W. TAYLOR
Edgewater, Maryland

The Black-capped Chickadee

IN general habits, the black-capped chickadee is much like the Carolina chickadee, which is the common subspecies throughout the south and most of Virginia. The most noticeable difference is in their voices, and there are minor variations in plumage and size.

The black-cap's "chick-a-dee" call is slower and more clearly enunciated than the slurred, hurried version given by the Carolina. And the "fee-bee" whistle of the black-cap is sharply two syllabled, differing markedly from the four-noted whisper of the southern bird.

The plumage differences are so slight that few field observers can make the distinction with certainty. The black-cap has white-edged wing feathers (not present in the Carolina) and white-tipped feathers on the lower throat where the black meets the white (also not present in the Carolina). The black-cap is also a slightly larger bird.

Matters are complicated by intergradation where the ranges overlap, and by seasonal changes in plumage, so the only reliable way to separate the two subspecies in the field is by voice.

Another method would be by geographical location, since the black-cap is the bird found nesting in the higher elevations in the western part of the state. During the colder months, there is considerable dispersal, and the black-cap turns up with some regularity eastward and at lower elevations. There is evidence that in certain years there are black-cap "invasions" when large numbers of them move out of their normal range.

It is likely that few people attempt to distinguish the subspecific varieties of chickadees, though it is a bird familiar to nearly everyone. And it is a favorite of all who know it, with its cheerful disposition and confiding ways. Not a gifted songster, nor endowed with bright plumage, it wins friends through the sheer force of its personality alone.

The chickadee is a frequent visitor to backyard feeding stations, where it is especially partial to suet and sunflower seeds. Where conditions are favorable, it may even be persuaded to use a nesting box, such as are provided for wrens. They prefer a more natural, deeper cavity, however, so a bark-covered box with considerable depth would have much more appeal.

ON THE LIGHTER SIDE

By TONY PHOENIX

JOURNAL OF A DOG KENNEL

I SHOULD have known better than to try it. It was a mistake from the beginning. I'm no good at that sort of thing and I knew it.

It's just that . . . well, I wanted to try. It would be satisfying when it was finished. Just think—a dog kennel built with my own hands.

I got the idea shortly after I got two new bird dogs. Why, I asked myself, should I pay someone good money to do what I could easily do myself? When finished, it would be something to be proud of, something to show visiting relatives and door-to-door salesmen.

In fact, I figured it all out in my head and it looked easy. All I'd have to do was to measure off in the back yard how big I wanted the kennel to be, then buy enough mesh wire fence to go around it, find some locust posts, and nail the fence to the posts. Simple.

The measurement—if you can call it that—was my first mistake. Someone had told me that a man's step is the same as a yard. Well, I'm here to tell you that it's not. At least, mine's not. It's something else; I'm not sure what. Anyway, I had enough heavy mesh wire left over to build exactly one-fourth of another dog kennel or a good-sized rhinoceros trap, neither of which I have a pressing need for.

There's also a cruel and inhuman point in this dog kennel building project. It's called post hole digging. It was also called many other things before I was through on that hot July day.

The tools one uses are (1), a post hole digger and (2), a tamper. Both predate what the historians call The Age of Reason and were probably used at times as implements of torture.

The tamper is a six-foot iron bar, sharp on one end and blunt on the other. You must repeatedly raise it over your head, drive the sharp end a couple of inches into the hard ground, then jiggle it. It loosens the soil where you plan to plant a post. It weighs just about the same as a six-year-old child.

The hole digger is simpler. You drive it into the soil you've jiggled, spread the handles which in turn causes the bottom, or mouth, of the thing to close, and lift out the loose dirt. The only art required here is to sneak it by your foot without dumping a digger full of dirt into your shoes.

Four hours and two post holes later, two of my friends showed up.

One of them, considerably smarter and therefore quicker than the other, started limping and pressing both hands against the small of his back the minute he turned the corner of the house and saw what I was doing.

"Just got out of the doctor's office," he informed me between moans. "Slipped disc, I think. I just stopped by to see if I could borrow your boat motor. The doctor seemed to think a little fishing might do me good." His back didn't seem to bother him any as he carried the motor away.

The second friend couldn't think fast enough to get away that easy, and I almost had him cornered into helping me before he found a means of escape. I saw his face light up when it hit him.

"Gotta go," he said. "Wife's expecting a baby." He looked a little embarrassed, but he nevertheless managed to work up courage to ask to borrow my new spinning outfit before he left. I was to learn later that he'd told me the truth. His wife was indeed expecting—in October, and this was July.

Finally the cursed holes were finished and the heavy locust posts were placed in them, more or less upright. I stood the roll of wire up, nailed the loose end to a corner post, and started tugging to unroll the rest to the next corner. I almost made it when something slipped or came loose or malfunctioned, the roll started whirling backwards, and I found myself entangled in a very stout roll of dog wire. The wife was no help in getting me out. She summoned a strong neighbor who managed to free me, but it seemed to me that he snickered a lot. He stayed, though, to help me stretch and staple the rest of the wire to the posts. I'm almost sure I continued to hear snickers from time to time when his back was turned to me. I paid him well and he left happy.

I then started on what would be my last step—building the door to get in and out of the kennel.

Doors, I learned, have a mind of their own. They take on forms, shapes and sizes that you'd never planned at all when you started sawing and nailing. Finally, I completed mine and managed to get it hung in the general area that I had planned for it to be. It works well in good weather, but when the weather is damp or the moon is full, I can't get it open.

On those days I just shove food and water for my dogs through a crack (that I somehow overlooked while building the door), go back inside the house and brood while I watch re-runs of Daniel Boone.

Edited by HARRY GILLAM

Starting at the Top

Bernice Nunnally, wife of George T. Nunnally and mother of two children, displays her 8 point buck. This is her first and was bagged near Lake Chesdin, in Dinwiddie County, Virginia. She, her husband and son are members of the long established Sutherland Hunt Club in Sutherland, Virginia. Last spring, she also bagged her first gobbler that topped the scale at 20 pounds. That's certainly starting off with a bang.

Sweeping Plans Announced for Back Bay Refuge

A master development plan for Back Bay National Wildlife Refuge which will ultimately cost some $1,500,000 has been released by the Bureau of Sport Fisheries and Wildlife. The plan will emphasize multiple use on the area, which includes 4,600 acres of barrier beach and freshwater marsh land plus a like amount of open water in Back Bay. More than 250 species of birds winter on the refuge or visit during migrations. The plan provides for an interpretive center, recreational facilities and wildlife habitat development. Special management measures will be taken to benefit threatened wildlife which includes the ipswich sparrow, the peregrine falcon, the bald eagle, and the osprey. Much of the development will consist of trails, observation towers, boardwalks and exhibits which explain the ecology and history of the area.

Unusually Nice James City Buck

This buck with large, nearly perfect, rack was killed in James City County by Lester R. Powell of Toano, while hunting with the Toano Hunt Club. The big buck weighed 160 pounds.

Smith Mountain Coho

This 3 pound 8 ounce coho salmon was caught in Smith Mountain Lake by Mrs. Ruth King of Severna Park, Maryland, while fishing out of Cedar Key. It is one of many taken from the lake late last fall.

Double Citation

C. B. Rose of Richmond holds a mounted 5 pound 5 ounce citation smallmouth taken from the James River in the fall of 1968 and, below it, a near twin 5 pound 3 ounce specimen he caught last fall in the same area.

South Plants Millions of "Supertrees"

Almost 60 million genetically superior pine seedlings were planted this year by the pulp and paper and lumber industries in the 13 southern states, according to the Southern Forest Institute. The superior seedlings—often called Supertrees—grow taller, straighter, bigger around and less tapered from bottom to top as much as 25% faster than ordinary pines. Thanks to careful selection, grafting and cross-pollination, forest researchers may soon be able to develop genetically superior strains of hardwood too.

Big Smith Mountain Gobbler

Martinsville Bulletin
Photo by Airon B. Keen

Otha H. Shelton of Martinsville downed this 19¾ pound turkey in Pittsylvania County south of Smith Mountain Lake.

Edited by ANN PILCHER

Smyth County Stresses Safety

Courtesy *Saltville Progress*

State Game Warden Woodrow Newman (at right) holds one of the NRA Safe Hunter patches earned by Tim Crawford (left) and 346 other students, many of them girls, who completed the firearms safety course conducted in January at Smyth County's R. B. Worthy High School. Also pictured are Warden Beecher Perry (holding Tim's certificate of course completion) and school faculty member "T-Bone" Lewis. Newman, Perry and Warden Patrol Leader Roy Smith of Washington County handled the course instruction, with assistance from Worthy High teachers.

Contest Winner

According to Franklin T. Mabe, president of the Big Walker Game and Fish Club, this 191 pound field dressed deer earned the club's annual "Big Buck" award for 13 year old hunter Perry Smelser. Brought down on opening day, the 11 pointer was one of the largest deer taken during the past season in Wythe County.

Courtesy *Southwest Virginia Enterprise*

Virginia Youth, Part of Recycling Effort

Glass and household metal scrap were collected in February by the St. Cloud (Minn.) Area Environmental Committee as part of a recyclization drive, according to one of its spokesmen, John Satterlee, a St. Cloud State College junior, resident of Vienna, Va., and son of Virginia Game Commission Information Officer F. N. Satterlee.

According to an Associated Press survey, collection and recycling of trash is being carried on with increasing frequeney across the country by government agencies, citizen's groups and large corporations. All have the same aims: cut down pollution and conserve natural resources.

Reynolds Metals Company—which has established eight centers around the country where used aluminum cans are repurchased, shredded and sent to Reynolds plants for reuse—feels they started the whole recycling trend.

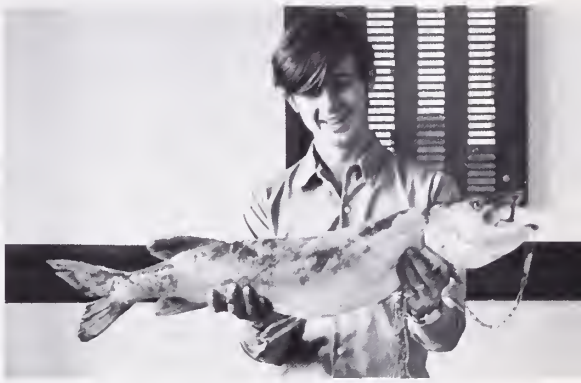
In New York City 17 Coca-Cola Bottling plants are open each Saturday to reelaim bottles and cans, paying a nickel for coke bottles; half a cent for other bottles and cans. The General Electric plant at Providence, Rhode Island, colleets all types of bottles and recycles the glass for use in the metal base of light bulbs. Owens-Illinois, Inc., in Brockport, N. Y., pays a cent a pound for used bottles which are made into new glass.

According to one paper company, about 12 tons of recycled newspapers save 187 trees. President Nixon's environmental message to Congress in February stated that governors were being asked to review state purchasing policies with an eye to requiring use of recycled paper.

Hanover 3 Pointer

"R. B." Chenault, Jr., 8, of Hanover Courthouse, holds tightly to the antlers of the 3 point, 135 pound buck which he brought down with a 410 shotgun on November 28 while hunting with his father in the courthouse area. This was R. B.'s third hunting season.

Husky Musky



This muskellunge came from the Shenandoah's South Fork on February 21. Front Royal resident Barry Kidwell, 17, used a casting rod to take the 10 lb. 1 oz. lunker, which measured 33 inches. It's the second largest musky catch from the South Fork reported to date to the Game Commission.

One of Fifty

Eight year old Dale Massey's 1970 fishing season was clearly a success. The Antoich resident landed 50 largemouth bass, 20 weighing between 2 and 5 pounds, while fishing Lake Orange, Fluvanna Ruritan, Buggs Island and Winston Lakes, and several Fluvanna County private ponds. Dale has a decided knack for knowing where largemouths might be lurking, and his skillful casting, retrieving, and use of the "deadly" purple worm surprised not only other fishing companions but his father as well.

Dale Massey holds 5 pound largemouth catch taken on purple worm from a Fluvanna County private lake.

Edited by JIM KERRICK

If Your Boat Has Sunk

Pleasure boats don't often sink. When they do the owner may be blameless, but he has a job on his hands.

In the case of a small boat with flotation in the form of tanks, styrofoam or other light material, or just plenty of light lumber in her, it may be possible to haul her into shallow water. But with a larger boat, the first thing to do when you get the bad news is to make a deal with a professional salvage concern to raise the boat and get her to a yard where she can be hauled.

The yard can inspect the boat and repair the damage that caused the sinking, but that's only a part of the job.

Once she's hauled and the water is out of her, clean up the mess. Take everything movable out of her. Hose her down inside and out with fresh water and detergent. She can't get any wetter, and it will get the salt and silt out.

The engine is Number One on the list. Have a competent, experienced mechanic take down the engine, drain all spaces such as crankcase, gear housings, etc., rinse out with fresh water, then fill cylinders with oil. Dry and oil everything mechanical.

Reverse gears with separate lube systems should be drained and oil-filled.

All electric gear such as starter, generator, coil, distributor, etc., should go to an electric shop and be thoroughly overhauled or replaced.

Outboard motors that have been underwater should have this same treatment.

Batteries should be dumped, flushed, have new electrolyte installed, and recharged.

Radio, fathometer, RDF and all other electronic equipment must be turned over to a good electronic shop for overhaul.

Bunks, cushions, bedding, life preservers, etc., should be washed and dried in the sun, and sails and cordage hosed down and dried.

Fuel and water tanks must be purged of salt water and dried out.

Fire extinguishers should go to the dealer to be serviced.

All tools and equipment must be dried, cleaned and oiled.

Look over all equipment with an open mind as to whether it will be more practical to salvage it or replace it.

If the boat has to be left anywhere except in a well-protected boatyard, arrange for a watchman to prevent theft and mischief. The prudence of adequate insurance coverage can readily be seen from the foregoing.

Canoeists Stage River Cleanup

Courtesy *The Rappahannock News*

Wearing life jackets, knee pads, rubber suits in some instances, and carrying long hooks, Canoe Cruisers Association members and other paddlers floated 6½ miles of shallow Thornton River in Rappahannock County one Sunday in February collecting great quantities of trash—the accumulated litter of years of neglect and indifference. Game Warden Irvin Kenyon, pictured above with a few of the 70 paddlers, assisted with preliminary river survey, water level check, talks with property owners and removal of trees which had fallen across the stream. Several landowners between Fletcher's and Rock Mills allowed the group to use their property as temporary trash deposit areas.

File Boat Plan on Long Cruise

Pilots are not allowed to fly planes without filing a flight plan. Boat skippers may well take a tip from this regulation.

It is a good idea to file a plan of your boat trip, if for any distance, with some responsible person ashore. This is the marine equivalent of an aircraft flight plan. It is a record of where you intend to cruise so that if you should have any trouble, rescuers will be aided in searching for you. Ask a U. S. Coast Guard Auxiliary unit officer. He will tell you how and where to file a plan.

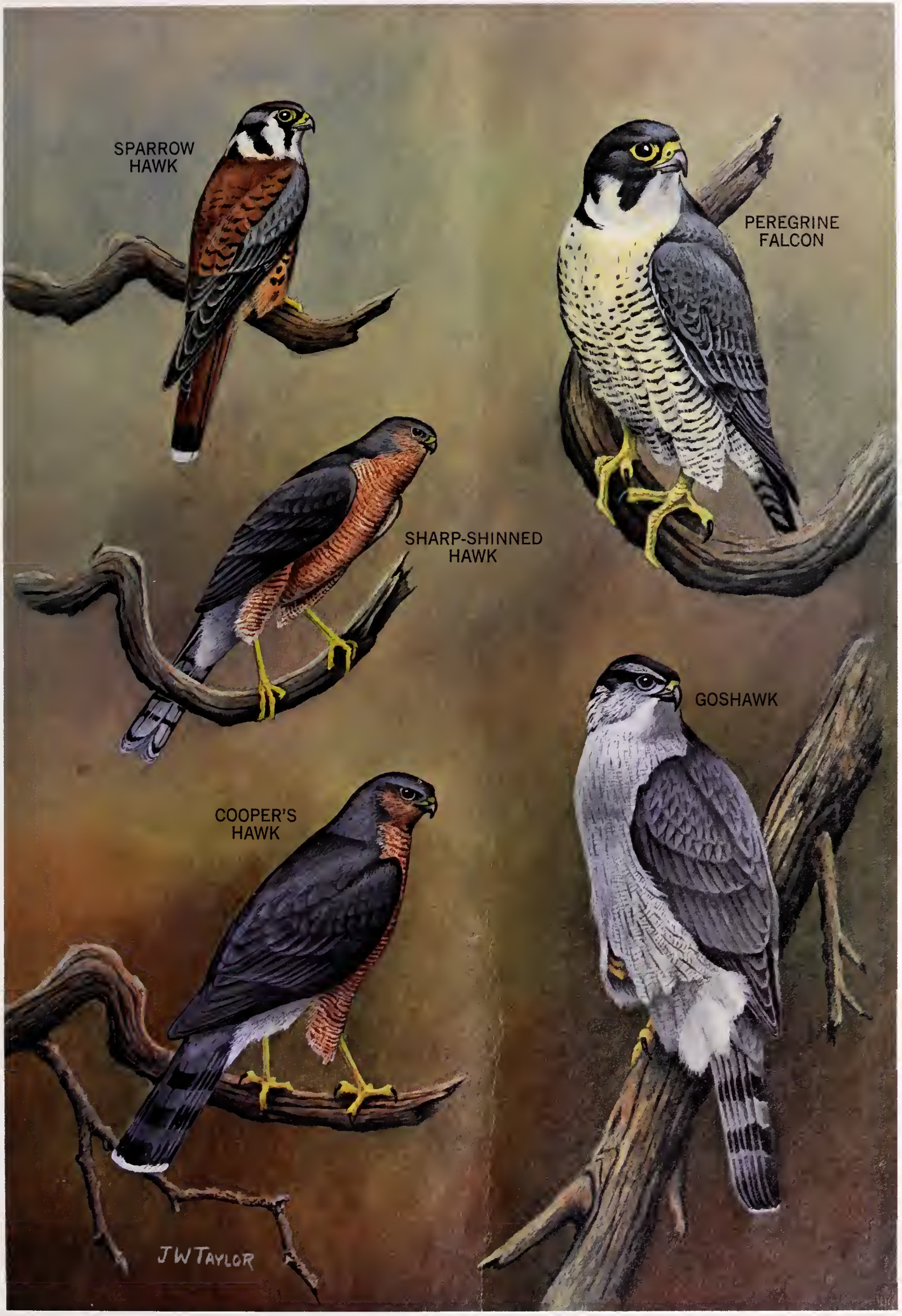
Protecting Your Investment

Safeguarding your boat and your crew is job number one. Protecting your boating investment is number two on your list if you are to assure your continued enjoyment of the sport. This is a job for your insurance agent or broker. There are two basic classes of coverage for your boat—one indemnifying you for loss or damage to the boat or its contents, equipment, etc., caused by fire, explosion, sinking, collision and other specific hazards. The second, equally important, protects your legal liability for injury to other persons or damage to their property, caused by your boat.

The first type of coverage, called hull insurance, is available on either a seasonal basis (generally from May 1st through October 31st in northern climates) while your boat is in commission. Or you can get year-round protection for the same hazards, whether the boat is in commission or laid up. As to which kind of hull insurance—seasonal or year-'round—it's a prudent skipper who knows that while the boating season may be over, fire still burns and hurricanes still wreak havoc even when boats are drydocked.

The second class of coverage, protection against legal liability, is every bit as important to you as the same type of insurance on your automobile, when you consider the hundred and one kinds of accidents for which you can be sued and held liable.

For the security of your wallet, talk it over with your insurance agent or broker.


SPARROW HAWK
PEREGRINE FALCON
SHARP-SHINNED HAWK
GOSHAWK
COOPER'S HAWK
J W TAYLOR

FREE RUNNING DOGS

DESTROY WILDLIFE